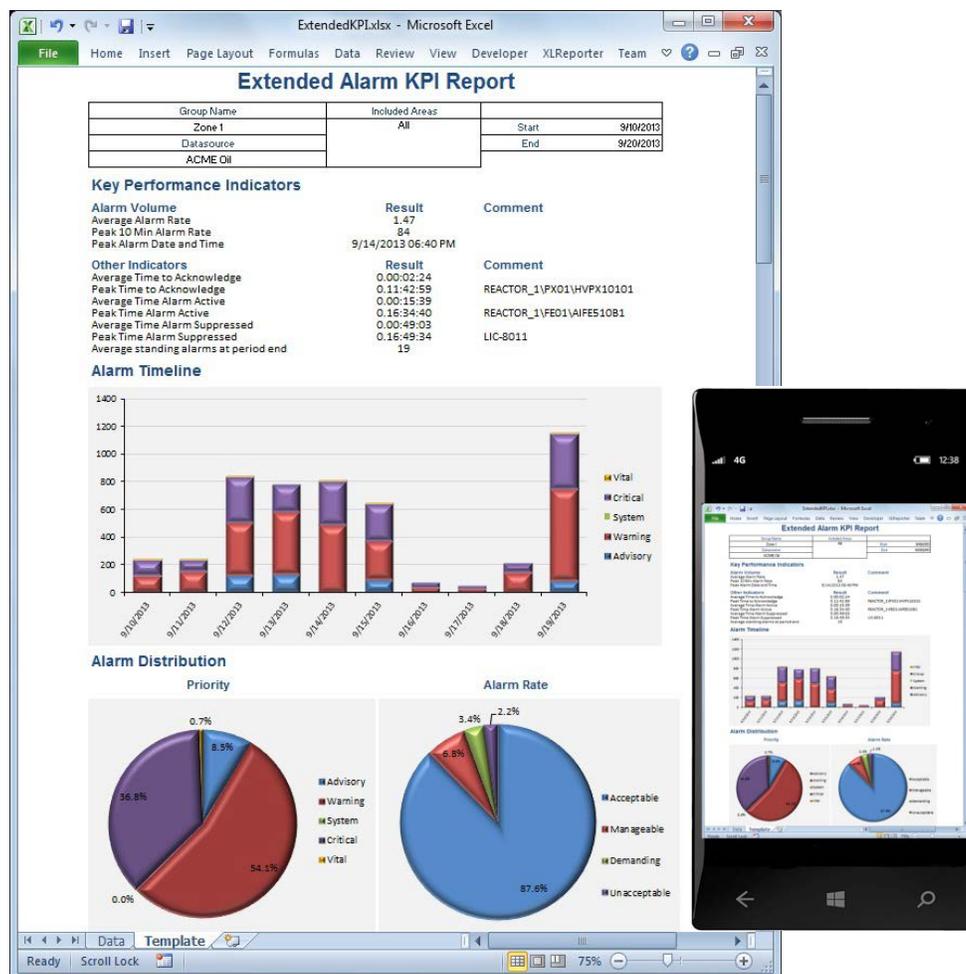


XLReporter® for DeltaV™ Analyze

This document describes how to augment the standard DeltaV Analyze Alarm Statistics Report, to customize content or publish it in alternative forms, using the SyTech XLReporter report generation and publication application. The standard DeltaV Analyze report is produced in Excel workbook format and contains alarm system performance information for either an entire DeltaV control system or for an individual operator workstation, for up to 30 days. With XLReporter the contents of the standard DeltaV Analyze report may be easily and automatically historized to produce custom reports for any range of time, encompass data from multiple systems and operator workstation, and be published by email, webpage, FTP transfer for dashboard integration or network printer.



The SyTech XLReporter for DeltaV Analyze historizes alarm Key Process Indicators (KPI) for trend analysis, reporting, and distribution.

Table of Contents

Introduction	3
Overview	3
Benefits	4
Consolidation	4
Reporting	5
Publishing	7
Learn More	9

Introduction

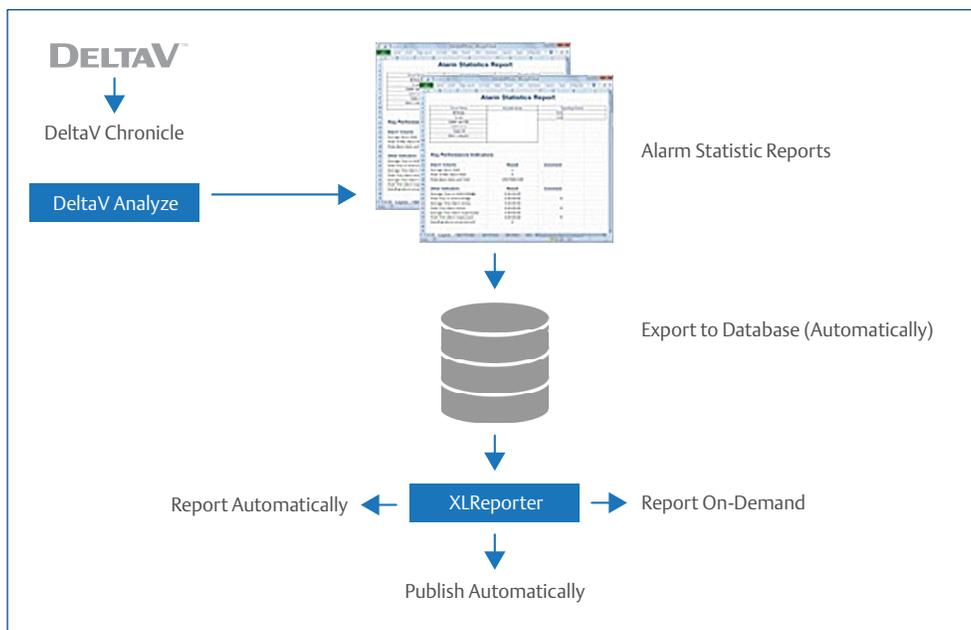
Both EEMUA-191¹ and ISA-18.2² stress the importance of periodic measurement of Key Performance Indicators (KPI) of your alarm system. DeltaV Analyze provides DeltaV process control and safety system users with a pre-engineered ready-to-use Alarm Statistics report in Excel workbook format, making KPI determination fast and easy. Multiple instances of this report can be defined, custom named, scheduled by shift, day, week, or month, or run-on-demand, filtered by operator console position, and routed to a specified file folder.

This whitepaper describes XLReporter for DeltaV Analyze, a software product developed by SyTech, Inc. (www.sytech.com) under a joint agreement between Emerson and SyTech.

XLReporter for DeltaV Analyze automatically extracts the alarm metrics and KPIs from the Alarm Statistics reports to a database to enable a broader understanding of alarm activity through flexible, dynamic analysis of historized KPIs from multiple systems and operator positions.

Overview

An overview of XLReporter for DeltaV Analyze is shown in the following diagram.



¹EEMUA Publication 191 – Alarm Systems: A Guide to Design, Management and Procurement – Third edition, published by the Engineering Equipment and Materials Users Association in 2013. ISBN 978-0-85931-192-2

²ANSI/ISA-18.2-2016—Management of Alarm Systems for the Process Industries – approved March 17, 2016. ISBN: 978-1-941546-86-4.

Benefits

XLReporter for DeltaV Analyze increases the effectiveness of the DeltaV Analyze user in three areas:

The key benefits of the consolidation component are:

- The Alarm Statistics reports are consolidated into a database automatically and in the background.
- Existing Alarm Statistics reports can be easily included in the consolidation.
- Consolidation provides new KPIs for duration of your choice and system-to-system trend analysis.

The key benefits of the reporting component are:

- Pre-defined Excel templates for consolidated Alarm Statistics reports are provided.
- No Excel installation necessary for generating reports automatically and on-demand.
- Custom templates are produced in the familiar environment of Excel using the built-in tools.
- Report templates produce reports automatically and on-demand.
- Dashboard templates allow users across the network to access the data easily for their own purposes.

The key benefits of the publishing component are:

- Information is distributed automatically.
- Reports can be produced in Excel, PDF, and HTML formats.
- Reports can be distributed by Email and FTP.

Consolidation

Reports from DeltaV Analyze are limited to a period of up to 30 days and presented in fixed-format Excel worksheets. To compare alarm performance for different operator positions and systems or to trend alarm system performance over extended time periods requires additional effort to manually merge multiple reports.

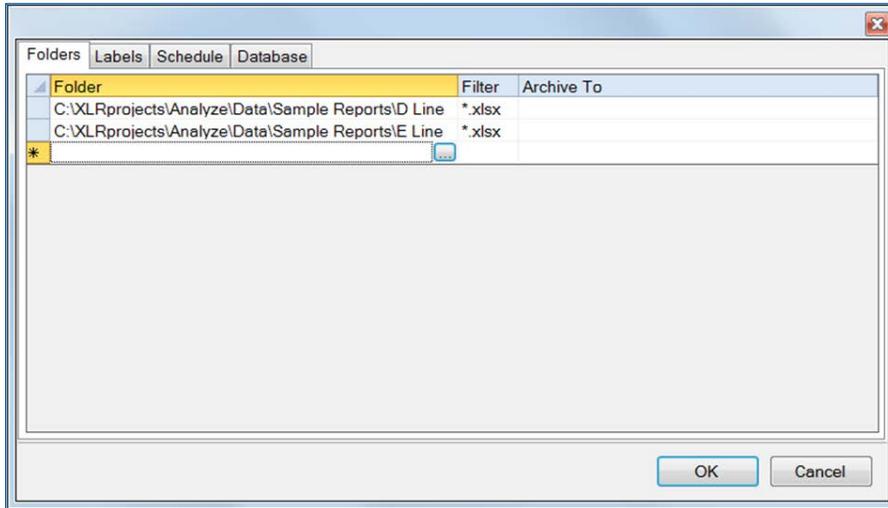
The consolidation provided by XLReporter for DeltaV Analyze automatically extracts the information from each Alarm Statistics report and stores it to a database. As part of the procedure it also saves certain report “header” information as follows:

- Data Source
- Group Name
- Area
- Start and End Date

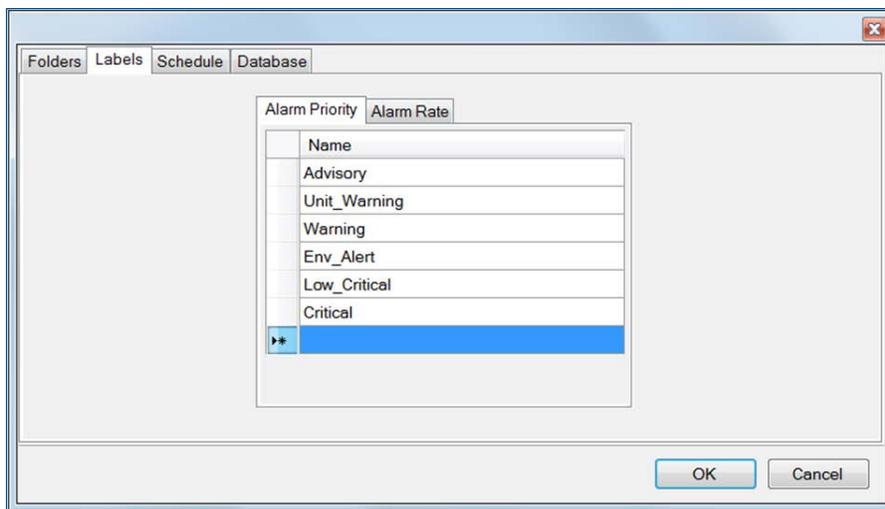
This information is used in on-demand reports (see later) as additional filtering parameters.

In order to provide a constant stream of information to the database, Alarm Statistic reports need to be produced in a timely manner, which is easily accomplished using the DeltaV Analyze report scheduler. The frequency at which the reports should be produced depends on the desired granularity of consolidated reporting. For example, a site with three process areas that require consolidated reports for one or all areas over each day/week/month or year would need to schedule a daily Alarm Statistics report for each area, i.e., three reports a day.

The setup of the consolidation is performed in the DeltaV Transfer application provided by XLReporter. Using the application, the target database and the folder where the Alarm Statistics reports are stored is specified. Multiple folders are supported.



Alarm Priority and Rate labels may need to be adjusted if they have been modified in DeltaV Analyze.



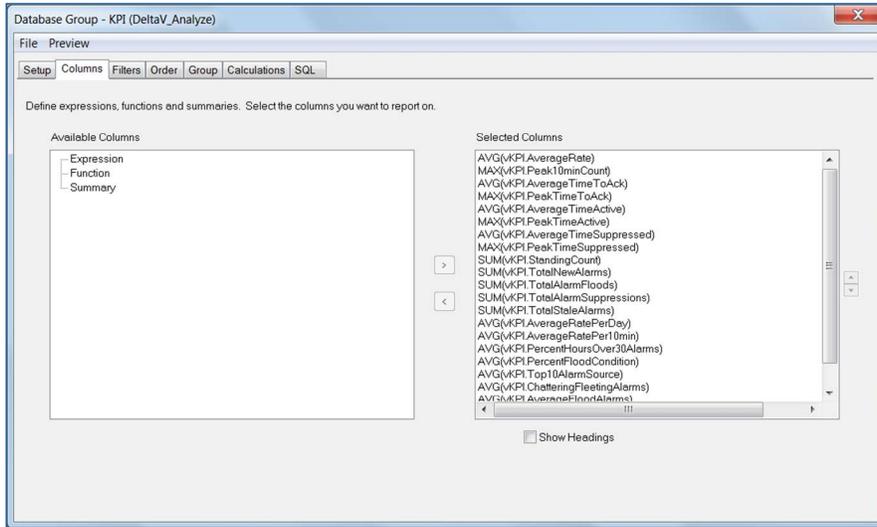
The application will automatically create/modify the tables in the database specified.

Reporting

Report Templates

Reports are produced from report templates. XLReporter uses Microsoft Excel as its “design studio” to design report templates. As part of the template design, workbook and worksheet naming convention is specified and XLReporter’s management functions can be included.

Adding data sources to the template is done by point-and-click methods, without VB scripts or any knowledge on SQL programming. The stored metrics in the consolidated database are presented in lists from where the user selects their requirement.

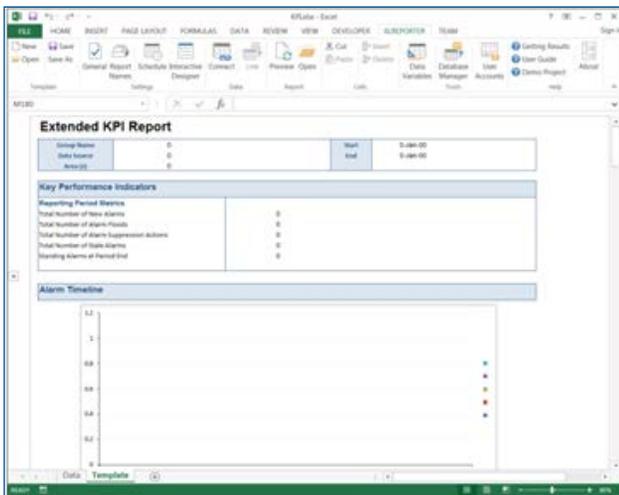


Other data sources, such as historical data from the DeltaV Continuous Historian or batch data from the DeltaV Batch Historian, can also be referenced in the same template.

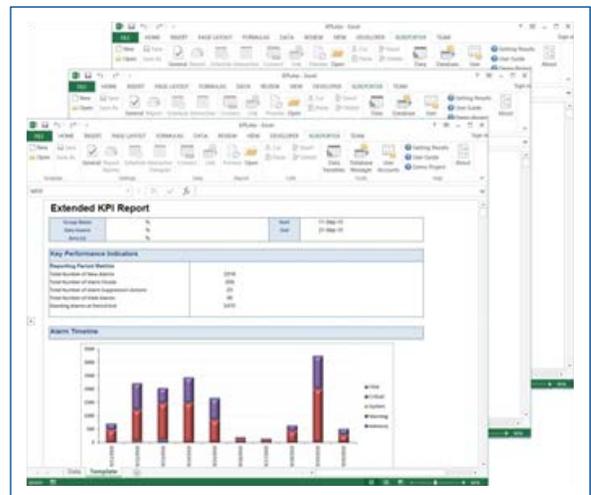
Report Automatically

By specifying relative date/time periods in a template, the template can be scheduled periodically or on process events. For example, a weekly report may be produced on a specific day of the week or a daily report may be produced for the 24 hours prior to when a “fault” condition occurred.

XLReporter uses its own reporting engine to produce a report from the template so a local copy of Excel is not required.



periodically



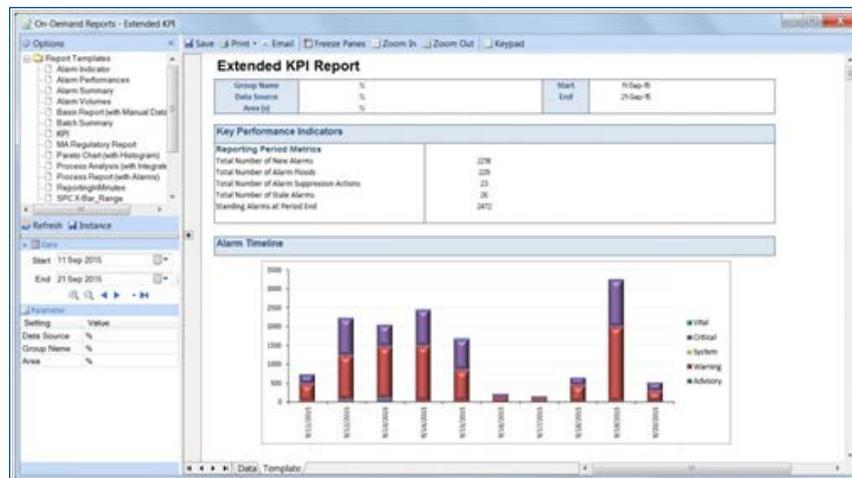
Report On-Demand

XLReporter for DeltaV Analyze provides on-demand reporting for users that require specific information at specific times, locally or from a station across the network. Reporting on-demand requires the user to specify template variables and have the report delivered to their desktop or tablet.

As mentioned earlier, the following information together with a time period can be used as filters for on-demand reporting by:

- Data Source (i.e., DeltaV system)
- Group Name (i.e., DeltaV operator workstation)
- Area (i.e., process area as defined in the DeltaV system configuration)

Reporting is performed from the On-Demand Reports application where all the on-demand report templates are listed.



From the application, producing reports spanning multiple days for various parameters is a few clicks away.

Publishing

Getting the right report to the right person at the right time empowers users when information is at their fingertips. XLReporter for DeltaV Analyze offers a number of publishing options:

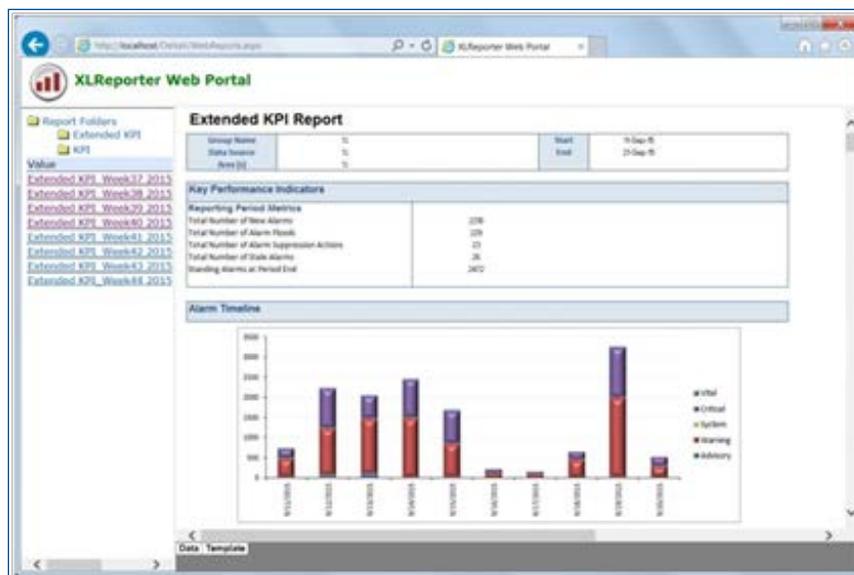
- **Printer:** Automatically print the report to any network printer.

- E-mail:** Automatically e-mail different reports to different groups of people. Add “live” process data to the e-mail message at the time when it is sent.



Reports can be sent by eMail

- Web pages:** Use XLReporter to create a web portal and have the reports stored to the web portal. With minimal configuration, the reports are now in easy reach of anyone that has access to a web browser.



Facilities that support their own web server can have the reports published to their server. An FTP client interface is provided for this purpose.

Learn More

For more information about the XLReporter for DeltaV Analyze contact your local Emerson sales office, or download an evaluation copy of XLReporter for DeltaV Analyze at www.sytech.com.

For more information about DeltaV control system alarm management, including DeltaV Analyze, visit the website www.emerson.com/deltav and click on the Alarm Management link to access this and other DeltaV whitepapers, product datasheets and product demonstration videos.

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